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APRIL 1984

Pre-IMTS '84 Supplement I:

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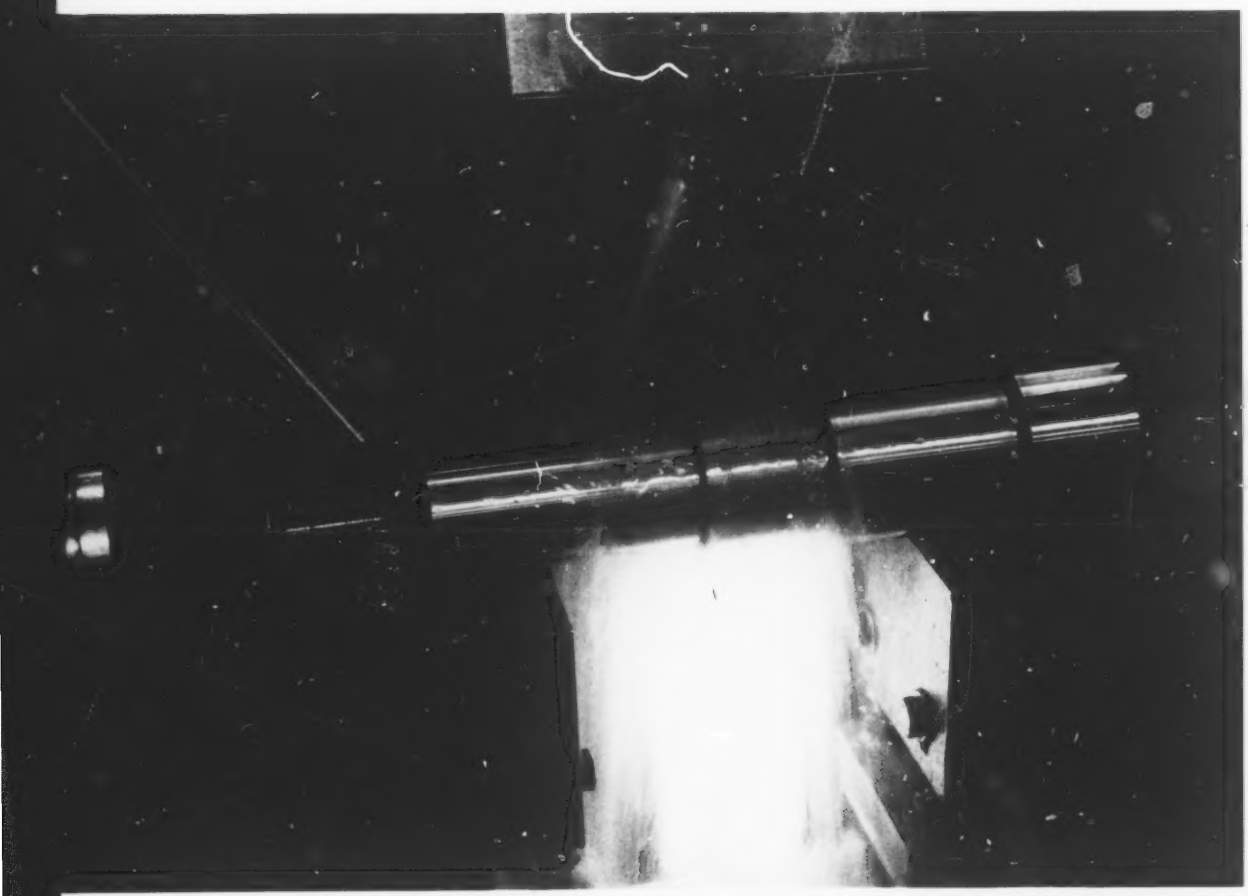

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NEXT MONTH:
Spotlight on MACHINING CENTERS reveals the latest state-of-the-art along with manufacturing benefits to be gained from one of the industry's most flexible and versatile type machines.

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make more than a tiny dent in the budget deficit."

He concludes: "The bottom line to this discussion is simple. While the economy has been able to survive deficits in the past, it has never before encountered ones of today's magnitudes relative to the economy without significant side effects. There is no need to hunt for the villain in this deficit scenario—everyone deserves a share of the blame. Responsibility for today's deficits lies with the Congress, this and previous Administrations—and the American people who have continually asked for more from Washington than they were willing to ante up in the form of taxes.

"What matters at this point is that the deficit must be tackled immediately, if not sooner. Today's deficit may be boosting economic activity but tomorrow's will surely curtail it. Cutting the deficit quickly may be hard, but waiting until after the elections will not make the job any easier." □

INDUSTRY REPORT

CAD/CAM Industry Still Expanding

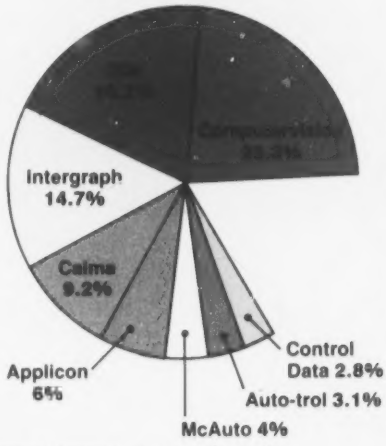
CAD/CAM industry revenues topped $1.7 billion in 1983, representing an annual growth rate of 32 percent, according to a recent survey. After sluggish growth in the first half of the year, sales picked up with a vengeance and pushed revenues far past the 28 percent growth rate of 1982. The growth rate was still below the 40 percent growth recorded in 1981, however, reports Daratech, Inc., Cambridge, MA.

New CAD/CAM vendors continue to enter the market in record numbers. By Daratech's count, the number of vendors selling CAD/CAM systems in the U.S. has increased five-fold, from about 20 at the end of 1980 to well over 100 in 1983, with no growth letup in sight. The shakeout of weaker companies that many expected in 1983 still seems a long way off.

The survey results indicate that in the ongoing battle for market share, IBM, Intergraph, McAuto and Control Data all gained ground. Intergraph, the fastest growing vendor in 1982, was also the growth leader in 1983.

IBM, whose CAD/CAM sales to end users grew a little faster than the industry in 1983, is predicted to pass Computervision to become the industry's leading supplier in 1984. Copies of the survey are available for $168 from Daratech, Inc., P.O. Box 410, Cambridge, MA 02238.

1983 CAD/CAM Market Shares



Source: Daratech, Inc., Cambridge, MA

FMS News

Cincinnati Milacron, Cincinnati, has begun manufacture of components of a large flexible manufacturing system for **FMC Corp.** The $8-million system will be installed at FMC's Aiken, SC, plant where it will be used initially to produce a family of parts for the U.S. Army's Bradley Fighting Vehicle. Future plans for the system include the manufacture of components for the Army's Multiple Launch Rocket System.

The new order is part of a long-range technology implementation program at FMC, according to a spokesman there.

For the Bradley Fighting Vehicle production, the system has been designed to manufacture a family of 17 basic parts, entailing some 23 operations. Parts are expected to be produced at a rate of 15 ship-sets per week.

Cross & Trecker Buys Bendix Automation

Cross & Trecker Corp., Bloomfield Hills, MI, has purchased the Bendix Automation Systems Group from Allied Corp. for $65 million in cash and one million warrants to buy shares of its common stock.

Cross & Trecker spokesman Richard Priebe told PRODUCTION that the sale includes all units of Bendix Automation involved in machine tool operations with the exception of the Bendix/Comau joint venture overseas operations. The domestic portion of that joint venture was included in the sale.

The Bendix Automation units

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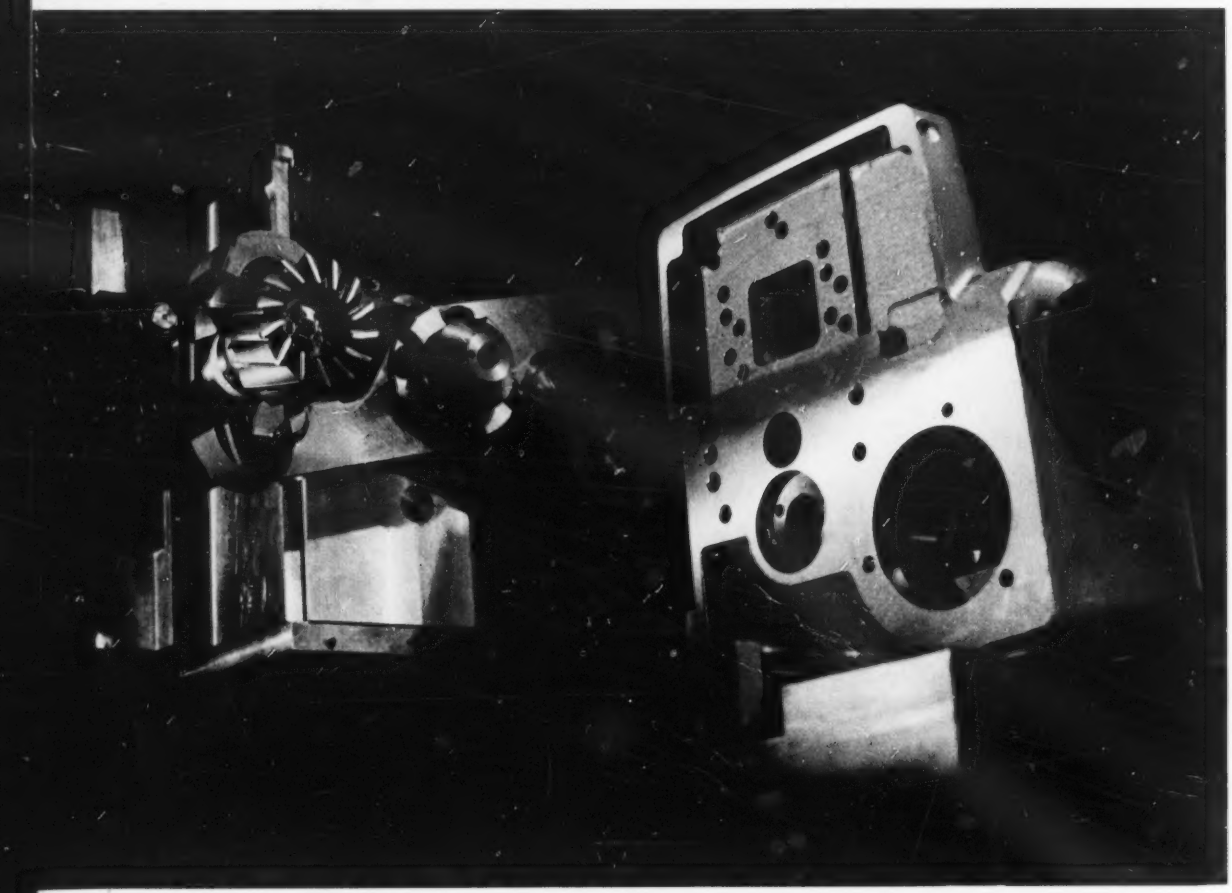

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THE COVER:
Automatic tool changing symbolizes the versatility and basic advantages of machining centers. Photo courtesy of Kearney & Trecker.

NEXT MONTH:
Spotlight on METAL FORMING reveals the latest technological developments, including the various aspects of stamping, punching, shearing, press brake operations, and more. Controls play an important part.

Represent expanded editorial coverage starting this month

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conveniently surveys monthly the country's leading financial forecasting firms, has this to report in the March findings: "The consensus of our sample of 48 top economists shifted back to the promise of a more buoyant 1984—reflecting a stronger-than-expected first quarter start for the year. The full year-over-year forecast by the group now sees a growth of 5.4%—back to the projection of last December and up from the 3.3% gain in 1983. This puts the fourth-quarter-over-fourth-quarter figure at a good 4.6% gain—compared to the unusually high 6.1% fourth quarter of 1983 vs. the cyclical low quarter in 1982. In contrast, the expected activity for 1985 eased a bit to 3.3% from the 3.4% figure a month ago."

Other Eggert notes: Inflation in 1984 as it affects the Gross National Product is up, to 4.6% from 4.2%. There is some disagreement about the future of interests, but on average, the rates for short-term three-month Treasury Bills are expected to rise by more than one-half a percentage point to 9.6% by the fourth quarter of 1985.

The Negatives

Those who remember Johnny Mercer's song know that the complete title is: "Accentuate the Positive; Eliminate the Negative." The two continuing clouds are, first, the federal deficit and what, if anything, can or will be done about it; and second, unemployment rates for the year are seen at about a 7.8% level, not bad in the light of recent history and the growing labor force, but no comfort to those who can't find work. *Robert F. Huber* □

INDUSTRY REPORT

GM Buys 13 Giant Milling Machines from Toshiba

Toshiba Machine Co., Ltd., Tokyo, Japan, has announced that it has received an order from General Motors for 13 giant Model BFD-200 horizontal die milling machines. The automaker will use the machines to "beef up" the auto body stamping die making operations of the Fisher Body Div. Toshiba reports that the machines will be installed at GM's Michigan facilities in Grand Blanc, Grand Rapids, and Kalamazoo, and at Mansfield, OH. BFD-200 machines will also be installed at GM's facility in Marian, IN.

The BFD-200 units are CNC double-column floor-type machines with six to seven axes (five simultaneous) which can profile large complicated workpieces. Deliveries of the machines will begin in August.

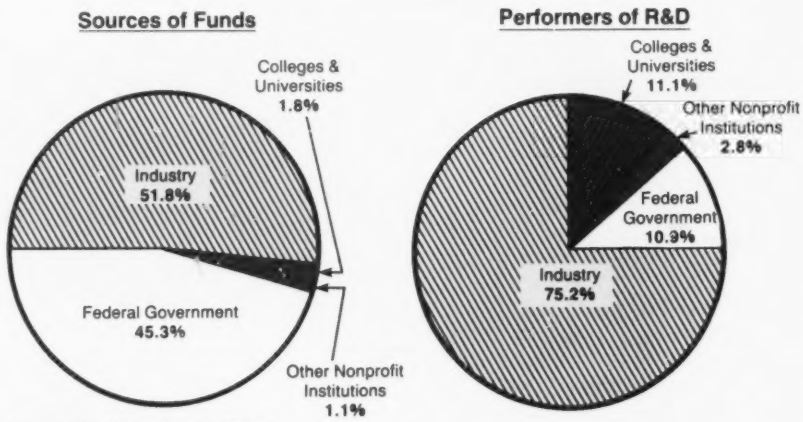
R & D Expenditures Rise 9 Percent in 1984

Research and Development expenditures are expected to reach $94.2 billion in the U.S. during calendar year 1984 according to the annual forecast of Battelle Memorial Institute's Columbus Div. This represents an increase of $7.7 billion (8.9 percent) over the $86.5 billion the National Science Foundation estimates was actually spent for R&D in 1983.

While much of the increase will be absorbed by continued inflation (estimated at 5 percent), Battelle forecasts a real increase in expenditures of 3.7 percent. This is slightly higher than the ten-year average of 3.3 percent.

The report notes that during the past decade industrial support of R&D has increased at an average compounded rate of 5.2 percent per year, while federal support has increased at 2.9 percent on average.

R&D Expenditures In the U.S., Calendar Year 1984



Source: Battelle's Columbus Division